

CLAIMS

1) A ball screw comprising a shaft (2) having a given longitudinal axis (3) and an external thread (5); a 5 spiral casing (6) mounted coaxially with said shaft (2); at least one set of balls interposed between the shaft (2) and the casing (6); and two seals (16) fitted, coaxially with said axis (3), between the shaft (2) and the casing (6) to define, together with the shaft (2) and 10 the casing (6), a chamber (17) for containing lubricant; and characterized in that each seal (16) comprises an annular member (18) made of a first material having a first coefficient of thermal expansion; and at least one insert (19) located inside said annular member (18) and 15 made of a second material having a second coefficient of thermal expansion lower than said first coefficient.

2) A screw as claimed in Claim 1, wherein said insert (19) is an annular insert.

3) A screw as claimed in Claim 1, wherein said 20 insert (19) has a substantially circular cross section.

4) A screw as claimed in Claim 1, wherein said first material is a plastic material.

5) A screw as claimed in Claim 1, wherein said first material is a polymer material.

25 6) A screw as claimed in Claim 1, wherein said second material is a metal material.

7) A screw as claimed in Claim 1, wherein each annular member (18) is defined externally by a surface

(18a) substantially coaxial with said axis (3), comprises an annular recess (28) opening outwards at said surface (18a), and has an O-ring (29) housed in said annular recess (28).

5 8) A screw as claimed in Claim 1, wherein each annular member (18) is defined axially by two surfaces (20) substantially perpendicular to said axis (3), and comprises a number of teeth (23) projecting axially from one of said surfaces (20) and equally spaced about said 10 axis (3).

9) A screw as claimed in Claim 8, wherein each tooth (23) is substantially sector-shaped.

10) A screw as claimed in Claim 1, wherein each annular member (18) has an internal thread (22) of 15 substantially the same hand as the external thread (5).